

AMENDMENTS TO THE CLAIMS

1. (previously presented) An antenna comprising:
 - a patch element;
 - a ground plane coupled to the patch element;
 - a first strip line in the ground plane coupled directly to a first edge of the patch element, the first strip line to propagate a first polarized signal in a first direction when activated;
 - a second strip line in the ground plane coupled directly to a second edge of the patch element, the second strip line to propagate a second polarized signal in a second direction when activated, wherein the first strip line is activated separately from the second strip line;
 - a first impedance matching flare coupled between the first edge of the patch element and the first strip line to adjust characteristics of the antenna; and
 - a second impedance matching flare coupled between the second edge of the patch element and the second strip line to adjust characteristics of the antenna.
2. (original) The antenna of claim 1, wherein the ground plane includes an aperture.
3. (original) The antenna of claim 2, wherein the aperture is cross-shaped.
4. (canceled)
5. (canceled)

6. (original) The antenna of claim 1, wherein the first direction is horizontal and the second direction is vertical.
7. (original) The antenna of claim 1, wherein the patch element is between 0.5 and 12 inches wide, the ground plane is between 1 inch and 18 inches wide, the first and second strip lines are between 0.03125 inches and 1 inch wide, and wherein the patch element and the ground plane are separated by between 0.25 inches and 5 inches.
8. (original) The antenna of claim 1, wherein the patch element is 4.25 inches wide, the ground plane is 6.5 inches wide, the first and second strip lines are 0.1875 inches wide, and wherein the patch element and the ground plane are separated by 0.5625 inches.
9. (canceled)
10. (previously presented) The antenna of claim 1, wherein at least one of the first flare or the second flare is between 0.0625 and 2 inches wide, and between 0.25 and 5 inches tall.
11. (previously presented) The antenna of claim 1, wherein at least one of the first flare or the second flare is 0.5 inches wide and 0.4375 inches tall.
12. (original) The antenna of claim 1, further comprising a dielectric material between the patch element and the ground plane.
13. (previously presented) The antenna of claim 1, wherein the second direction is greater than zero degrees and less than ninety degrees from the first direction.

14. (original) The antenna of claim 1, wherein the antenna is configured to read radio frequency identification (RFID) tags.

15. (canceled)

16. (canceled)

17. (canceled)

18. (canceled)

19. (canceled)

20. (currently amended) ~~The interrogator of claim 15,~~ An interrogator comprising:

a transmitter;

a receiver coupled to the transmitter;

a decoder coupled to the receiver to decode received signals; and

an antenna coupled to the receiver and the transmitter, the antenna comprising a patch element coupled to a ground plane, a first strip line in the ground plane to propagate a first polarized signal in a first direction, a second strip line in the ground plane to propagate a second polarized signal in a second direction, wherein the first strip line is activated separately from the second strip line, and

wherein the first strip line is coupled to a first edge of the patch element and second strip line is coupled to a second edge of the patch element.

21. (previously presented) The interrogator of claim 20, further comprising a first impedance matching flare coupled between the first strip line and the first edge of the patch element, and a second impedance matching flare coupled between the second strip line and the second edge of the patch element.

22. (canceled)

23. (canceled)

24. (canceled)

25. (canceled)

26. (currently amended) ~~The method of claim 22,~~ A method comprising:

alternately activating a first strip line on an antenna to propagate a first signal having a first polarization and activating a second strip line on an antenna to propagate a second signal having a second polarization;

searching for an identification tag using the first and second signals; and

identifying the identification tag,

wherein the second polarization is oriented greater than zero degrees and less than ninety degrees from the first polarization.

27. (currently amended) ~~The method of claim 22,~~ A method comprising:

alternately activating a first strip line on an antenna to propagate a first signal having a first polarization and activating a second strip line on an antenna to propagate a second signal having a second polarization;

searching for an identification tag using the first and second signals;

identifying the identification tag; and

~~further comprising~~ changing a frequency of the first and second signals.

28. (original) The method of claim 27, wherein changing the frequency comprises changing the frequency according to a user-programmed switching profile.

29. (original) The method of claim 27, wherein changing the frequency comprises changing the frequency according to an adaptive switching profile.